Amendments to the Claims:

The following listing of claims replaces all prior listings, and versions, of the claims.

Listing of Claims:

1 - 25. (cancelled)

26. (new) A method for forming a thermal barrier coating on a surface of a component, said method comprising the steps of:

evaporating a source of a thermal barrier coating matrix material and a source of a fugitive material;

co-depositing said thermal barrier coating matrix material and said fugitive material on said component surface so as to form a layer of said co-deposited thermal barrier coating matrix material and said fugitive material;

forming a porous network in said layer by heating said layer of said co-deposited thermal barrier coating matrix material and said fugitive material at a temperature and for a duration sufficient to liberate a portion of said fugitive material; and

depositing at least one layer of a thermal barrier coating ceramic material only onto said layer containing said porous network subsequent to said porous network forming step.

27. (new) The method of claim 26, wherein said evaporating step comprises evaporating a ceramic material selected from the group consisting of a zirconium based ceramics, carbides, nitrides, and silicides and evaporating a fugitive material selected from the group consisting of carbon, molybdenum, and tungsten.

28. (new) The method of claim 26, wherein said evaporating and co-depositing steps comprise evaporating and co-depositing said thermal barrier coating matrix material and said fugitive material using an electron beam physical vapor deposition process.

29. (new) The method of claim 26, wherein said evaporating step comprises evaporating a particulate form of said thermal barrier coating material and a particulate form of said fugitive material.

30. (new) The method of claim 26, wherein said evaporating step comprises evaporating an ingot of said thermal barrier coating material and an ingot of said fugitive material.

31. (new) The method of claim 26, wherein said evaporating step comprises evaporating a target comprised of an approximately uniform distribution of said thermal barrier coating matrix material and said fugitive material.

32. (new) The method of claim 26, wherein said evaporating step comprises providing a target having a molybdenum disk surrounded by a solidified

ceramic material and directing an electron beam in alternating fashion at the molybdenum disk and the solidified ceramic material.

33. (new) The method of claim 26, wherein said heating step comprises heating said layer to a temperature in the range of from 1750°F to 2100°F.

34. (new) The method of claim 26, wherein said heating step comprises heating said layer at a temperature and for a duration to evaporate at least 90% of a mass of said deposited fugitive material and wherein said porous network have a plurality of pores which measure from about 10 to 100 nanometers in diameter.

35. (new) A method for forming a thermal barrier coating on a surface of a component, said method comprising the steps of:

evaporating a source of a thermal barrier coating matrix material and a source of a fugitive material;

co-depositing said thermal barrier coating matrix material and said fugitive material on said component surface so as to form a layer of said co-deposited thermal barrier coating matrix material and said fugitive material;

said co-depositing step comprising altering a rate at which said thermal barrier coating matrix material and said fugitive material are deposited to form said layer with different levels of fugitive material in said thermal barrier coating matrix material; and

forming a gradated porous network in said layer by heating said layer of said co-deposited thermal barrier coating matrix material and said fugitive material with said different levels of fugitive material at a temperature and for a duration sufficient to liberate a portion of said fugitive material in each said level.

36. (new) The method of claim 35, wherein said evaporating step comprises evaporating a ceramic material selected from the group consisting of a zirconium based ceramics, carbides, nitrides, and silicides and evaporating a fugitive material selected from the group consisting of carbon, molybdenum, and tungsten.

37. (new) The method of claim 35, wherein said evaporating and co-depositing steps comprise evaporating and co-depositing said thermal barrier coating matrix material and said fugitive material using an electron beam physical vapor deposition process.

38. (new) The method of claim 35, wherein said evaporating step comprises evaporating a particulate form of said thermal barrier coating material and a particulate form of said fugitive material.

39. (new) The method of claim 35, wherein said evaporating step comprises evaporating an ingot of said thermal barrier coating material and an ingot of said fugitive material.

40. (new) The method of claim 35, wherein said evaporating step comprises evaporating a target comprised of an approximately uniform distribution of said thermal barrier coating matrix material and said fugitive material.

41. (new) The method of claim 35, wherein said evaporating step comprises providing a target having a molybdenum disk surrounded by a solidified ceramic material and directing an electron beam in alternating fashion at the molybdenum disk and the solidified ceramic material.

42. (new) The method of claim 35, wherein said heating step comprises heating said layer to a temperature in the range of from 1750°F to 2100°F.

43. (new) The method of claim 35, wherein said heating step comprises heating said layer at a temperature and for a duration to evaporate at least 90% of a mass of said deposited fugitive material and wherein said porous network have a plurality of pores which measure from about 10 to 100 nanometers in diameter.

44. (new) The method of claim 35, further comprising depositing at least one layer of a thermal barrier coating ceramic material substantially free of any fugitive material subsequent to said porous network forming step.